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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 559,071	04 27 2000	Yuji Hamada	0039-7694-2S	2046

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Oblon Spivak McClelland Maier & Neustadt PC
Fourth Floor
1755 Jefferson Davis Highway
Arlington, VA 22202

EXAMINER

HOBDEN, PAMELA R

ART UNIT PAPER NUMBER

2882

DATE MAILED: 11 07 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,071

Applicant(s)

HAMADA ET AL.

Examiner

Pamela R. Hobden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,9-13 rejected under 35 U.S.C. 102(b) as being anticipated by Fujimoto (JP 5-274587). Fujimoto discloses a noncontact type signal transmission device comprising a first member (figure 3), a second member configured to move along a predetermined orbit with respect to the first member (7), at least one light emitting device mounted on one of the first and second members (figure 5), at least one light receiving device (figure 5), at least one beam condensing device disposed between the light-emitting device and the light receiving device and having a function of condensing light from the light emitting device in a direction substantially perpendicular to the orbit (figure 3, figure 2),

Regarding claim 3: The beam condensing device is mounted on the member with the light receiving device (figure 9),

Regarding claim 4: The beam condensing device is disposed closer to the light emitting device than to the light receiving device (see figure 2, when the light emitting device is shown in its closest position to the condenser,

Regarding claim 9: The detector is further from the condenser than is the light emitting device), the beam condensing device is a curved mirror (3),

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Regarding claim 10: The beam condensing device does not have a function of condensing light from the light-emitting device in a direction substantially parallel to the orbit (figure 5),

Regarding claim 11: The beam condensing means has a function of diffusing light from the light emitting device in a direction substantially parallel to the orbit (figure 6),

Regarding claim 13: The device includes a unit for coding a transmission signal (15), a driving unit for driving the light emitting device(23), a distributor (17)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5-8,12,15,16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto. Fujimoto's disclosure is as shown above.

Regarding claim 5, 7: Without the English translation, Fujimoto fails to disclose the light condensed by the beam condensing device striking the light receiving device within a width substantially equal to a width of an effective light receiving surface of the light receiving device. One is essentially positioning the beam receiving device closer to the beam condensing device than a position to which the light is made to converge by the beam condensing device in this position. It would be obvious to one skilled in the

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art to set the detector to such a distance, in order to reduce noise and oversampling of the detector, and thus improve the image.

Regarding claim 6,8: Without the English translation, Fujimoto fails to disclose the light condensed by the beam condensing device striking the light receiving device within a width substantially larger than a width of an effective light-receiving surface of the light-receiving device, and thus wherein the light receiving device is disposed at a position closer to the beam condensing device than a position to which the light is made to converge by the beam condensing device. It would be obvious to one skilled in the art to position detectors so as the width of the beam is larger than a width of the detector to cause multiple detectors to receive the same signal, and as such, effectively compensate for a loss of a detector, and improve the image should a detector fail, as the other detectors are also picking up the image.

Regarding claim 12: Fujimoto fails to disclose a driving unit for driving the light emitting device in accordance with the coded transmission signal to turn on/off the light emitting device in accordance with the coded transmission signal. (Actually, the examiner would require an English translation to actually assure that Fujimoto fails to disclose this part of the apparatus therefore, Fujimoto may well disclose such a driving unit, as it would be obvious for such an application.) However, in applicants own admitted prior art, it is prior knowledge to have a coded transmission signal to turn on/off the light emitting device in accordance with the coded transmission signal.

(Figure 1, page 2 lines 2-14). It would be obvious to one skilled in the art to have such

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an on/off control in order to prevent the oversampling of the detectors, and thus cause false position readings of the ring.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 5,336,897) in view of Fujimoto (JP 5-274587). Watanabe discloses an x-ray computed tomography apparatus comprising an x-ray tube (12), a detector (16), a non-contact type signal transmission device for transmitting a signal output from the detector (figure 12), a unit for generating image data on the basis of the signal transmitted through the noncontact type signal transmission device (38), a unit for displaying the image data (40), a noncontact type signal transmission device with a stationary portion (18), a rotating ring disposed inside the stationary portion (10), a plurality of light-emitting devices discretely arranged on an outer surface of the rotating ring (figure 9, "T"), and a plurality of light receiving devices discretely arranged on an inner surface of the stationary portion (figure 9, "S"). Watanabe et al does not disclose the use of a beam condensing device for his non-contact type signal transmission device. Fujimoto does disclose the beam condensing device for his non-contact type signal transmission device.

It would be obvious to use Fujimoto's device with that of Watanabe, motivated by a desire to minimize signal loss of the light emitting device, better focusing, and thus improve imaging as a result of less data loss.

Response to Arguments

6. Applicant's arguments filed 7/18/02 have been fully considered but they are not persuasive. Fujimoto's figures 3, 5 and 10 clearly show that the light receiving device has a function of condensing light from the light emitting device in a direction substantially perpendicular to the orbit. Even without the teachings of Fujimoto, a substantially perpendicular direction for optical emission/reflection is a typical condition for optical transmission or pickup, unless the light is somehow blocked, which is not shown in Fujimoto's device.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela R. Hobden whose telephone number is (703)-306-5435. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703)-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-7382 for regular communications and (703)-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

prh
November 4, 2002

A handwritten signature, possibly reading "P. Hobden", is written in black ink over a horizontal line.